The Senate of the State of New Hampshire

107 North Main Street, Concord, N.H. 03301-4951

March 26th, 2018

Alexandra Dunn
Region 1 Administrator
Environmental Protection Agency
5 Post Office Square, Suite 100
Boston, MA 02109

Dear Ms. Dunn,

The New Hampshire Senate Energy and Natural Resources Committee will soon be hearing public testimony on House Bill 1766-FN, relative to remediating the Coakley Landfill in Greenland.

This bill would require the NH Department of Environmental Services to compel the parties responsible for the dumping of hazardous waste at the Coakley Landfill Superfund Site to implement a ground water extraction and treatment remedy, identified as Remedy MM-4 in the May 24, 1994 Remedial Investigation/Feasibility Study for the Coakley Landfill Superfund Site, within one year of the effective date of this bill.

Given the EPA's major role in the remediation efforts at the Coakley Landfill, the committee respectfully requests your attendance at the committee hearing to offer written and verbal testimony on this legislation. The public hearing on HB 1766-FN will take place at 9:15 a.m. on Tuesday, April 3rd, 2018 in SH 103 of the New Hampshire State House. Please contact the committee aide, Griffin Roberge, at (603) 271-2878 or griffin.roberge@leg.state.nh.us to confirm your attendance. Please bring six copies of written testimony if you are able to attend. Do not hesitate to contact Mr. Roberge with any questions you may have.

Respectfully,

Kevin Avard, Chairman
State Senator
NH District 12

HB 1766-FN - AS INTRODUCED

2018 SESSION

18-2503
08/04

HOUSE BILL ***1766-FN***

AN ACT relative to remediating the Coakley Landfill in Greenland.

SPONSORS: Rep. Messmer, Rock. 24; Rep. Cushing, Rock. 21; Rep. Bean, Rock. 21; Rep. Edgar, Rock. 21; Rep. T. Le, Rock. 31; Rep. P. Gordon, Rock. 29; Sen. Fuller Clark, Dist 21

COMMITTEE: Environment and Agriculture

ANALYSIS

This bill requires the department of environmental services to order the parties responsible for dumping hazardous waste in the Coakley Landfill to undertake certain remedial actions.

- -

Explanation: Matter added to current law appears in ***bold italics.***
Matter removed from current law appears [~~in brackets and struckthrough.~~]
Matter which is either (a) all new or (b) repealed and reenacted appears in regular type.

18-2503
08/04

STATE OF NEW HAMPSHIRE

In the Year of Our Lord Two Thousand Eighteen

AN ACT relative to remediating the Coakley Landfill in Greenland.

Be it Enacted by the Senate and House of Representatives in General Court convened:

1 Findings.

I. "Responsible Parties" means 78 organizations which dumped hazardous waste from off-site locations. Responsible parties are listed here: http://scorecard.goodguide.com/env-releases/land/npl-prp.tcl?epa_id=NHD064424153. The parties the Coakley Landfill Group (CLF) are comprised of:

(a) The city of Portsmouth (53.6 percent),

(b) The town of North Hampton (4 percent),

(c) The town of Newington (5.5 percent),

(d) Generators (20 percent),

(e) Transporters (16.9 percent).

II. The general court finds:

(a) The Coakley Landfill Superfund site is a 92-acre site located in Greenland, New Hampshire. Approximately 27 acres of the landfill was capped in 1992. Since that time, the responsible parties have been conducting groundwater monitoring in response to requirements in a groundwater management permit (GMP). The following was taken from the United States Environmental Protection Agency (EPA) Record of Decision:

(b) The Coakley Landfill was permitted by the state of New Hampshire between 1971 and 1985. In 1983, the state ordered the landfill closed. Landfill operations ceased in July of 1985 after investigations conducted by the EPA and state of New Hampshire raised concerns about contamination originating from Coakley Landfill. In 1983, EPA proposed to list Coakley Landfill on the National Priority List. The site was listed on the National Priority List in 1986.

(c) Record of Decisions were issued in 1990 and 1994, for Operating Units 1(OU-1) and 2 (OU-2), respectively. The Record of Decision for Operating Unit 1 included a cap over 27 acres of the landfill and a wait and see approach for groundwater and surface water migration termed "monitored natural attenuation" for OU-2. The remedy selected for OU-2 was the second least costly approach for remediation. The landfill does not have a liner underneath.

(d) OU-2 (management of migration) addresses groundwater contamination which has migrated from the landfill. A feasibility study (FS) was conducted in 1990 and evaluated 4 alternatives to control migration of contaminated groundwater which included:

(1) MM-1 minimal no-action (fencing and monitoring)

Estimated Time for Design and Construction: None

Estimated Capital Cost (1994 Dollars); $ 0

Estimated Annual Operation and Maintenance Costs: $98,000 Estimated Total Cost Over 30 Years (1993 Dollars); $1,212,000

(2) MM-2: Limited Action, Natural Attenuation and Groundwater Monitoring

Estimated Time for Design and Construction; 1 year

Estimated Capital Cost (1993 Dollars): $301,000

Estimated Annual Operations and Maintenance Costs; $ 98,000 Estimated Total Cost Over 30 Years (1993 Dollars): $ 1,412,000

(3) MM-3: Groundwater Treatment/On-site Disposal in Conjunction with OU-1 Groundwater Treatment System.

Estimated Time for Design and Construction; 2 years Estimated Capital Cost (1993 Dollars); $ 586,000

Estimated Annual Operation and Maintenance Costs: $ 151,000 Estimated Total Cost Over 30 Years (1993 Dollars); $ 2,067,000

(4) MM-4 capping/on-site groundwater pretreatment/on site groundwater treatment and disposal.

Estimated Time for Design and Construction; 2 years Estimated Capital Cost (1993 Dollars); $ 1,438,000

Estimated Annual Operation and Maintenance Costs: $ 196,000 Estimated Total Cost Over 30 Years (1993 Dollars); $ 3,232,000

(e) MM-2, one of the lowest cost remedies, was the selected remedy in the 1994 Record of Decision. This response action selected includes utilizing natural attenuation to remediate the contaminated groundwater plume; groundwater monitoring; and using institutional controls (ICs) to prevent use of contaminated groundwater.

(f) The OU-2 remedy effectiveness is predicated on the ability of chemicals to biodegrade naturally. Perfluorinated chemicals (PFCs) do not biodegrade and are very persistent in the environment. PFCs are migrating in site groundwater into private, public and commercial supply wells and at high levels into surface water bodies which are used for recreation and fishing. Therefore, OU-2 is no longer an effective remedial strategy.

(g) The department of environmental services regulates site contamination through a groundwater management permit (GMP). The GMP manages migration of contaminants within the groundwater management zone (GMZ) which has been expanded over time to include areas where contaminated groundwater has migrated away from the landfill. The Task Force concluded that the GMZ borders do not sufficiently define the extent of PFC- contaminated groundwater to the North, South, East, or West. Therefore, public water supplies of the towns of Hampton, North Hampton, Rye, and Greenland are threatened. Recently, PFCs were detected at 87 parts per trillion in one well that serves the town of Hampton. Aquarion Water Company shut the well down. Other adjacent wells saw annual total PFC increases of 2 to 3 times from previous year.

(h) This excerpt from the 1994 Management of Migration (MOM) (CDM, 1994) summarizes MM-4 in the following way: "The preliminary design of the extraction system would consist of wells constructed just upgradient of the wetlands west of the Coakley Landfill site or near the outermost plume. During final design, additional wells to speed the treatment process may be installed radially around the Coakley Landfill. The exact number of wells would be determined in the design phase. For costing purposes, the extraction system is proposed to include 6 shallow outwash wells or an interceptor trench drain of approximately 2,000 linear feet, 4 deeper till wells, and 3 bedrock extraction wells. Figure 6-1 showed the locations of the proposed extraction wells. Collected groundwater would be pumped through pipes constructed from the wells to the location of the OU-2 treatment facility."

The cost of this remedy was estimated at approximately $3,200,000 (CDM, 1994 Management of Migration Remedial Investigation/Feasibility Study (RI/FS) Report – Volume 3 of 3).

(i) On July 7, 2017 the department of environmental services issued correspondence stating the following:

"First, and in the near term, the department of environmental services believes that signage to alert the public to the presence of contaminants in the adjacent wetlands, seasonally flooded railroad bed, and the uppermost reach of Berrys Brook is appropriate. We have discussed this issue with the (EPA) and are working with them to determine how to best accomplish this.

Second, with regard to the expressed concerns about potential impacts to fish in Berrys Brook, the department of environmental services believes that additional work needs to be completed, in concert with the department of fish and the game determine whether the surface water quality in the lower reaches of the brook poses any risk to recreational anglers who catch and consume the stocked brown trout or other species from the brook. Since early May, the department of environmental services has been engaged with USEPA on this topic. The department of fish and game is currently working to address a number of relevant questions developed by USEPA about the fisheries. Once that information is received, we will work with USEPA and the department of fish and game to determine how best to address this question.

Third, the department of environmental services believes that actions need to be implemented at the site to provide additional removal or containment of the contamination, in order to mitigate these surface water quality impacts. In the long run, this will be the most reliable way to limit exposure to site contaminants via the surface water pathway."

(j) The original MM-4 remedy cost analysis included treatment for metals and volatile organic compounds (VOCs) which according to current data would not be required. The current treatment system would include granular activated carbon (GAC) to treat PFCs.

Cost for GAC system including filters and media (approximately 300 gallons per minute [GPM] treatment capacity) = $535,000 (2017 dollars)

Since the system would be designed to control migration off-site only with reinjection it is possible that one filter systems would be required at a cost of $535,000 (original equipment cost in ROD is

$155,000 resulting in an increased cost for treatment of $380,000) and total increase to approximately $3,800,00. In 2017 dollars the capital cost would be approximately $7,000,000.

2 Imminent Hazard Declared. The general court finds that an imminent hazard exists under RSA 147-A relating to the Coakley Landfill Superfund site due to threats to public and private drinking water in the towns of Hampton, North Hampton, Rye, and Greenland, and the surface water bodies that flow through all seacoast towns, including but not limited to: Hampton, North Hampton, Rye, Greenland, and Portsmouth. To address the imminent hazard relating to the Coakley Landfill Superfund site:

I. The department of environmental services shall compel the parties responsible for the dumping of hazardous waste at Coakley Landfill to implement remedial option MM-4 as detailed in the May 23, 1994 management of migration Remedial Investigation/Feasibility Study prepared by the United States Environmental Protection Agency within 1 year of the effective date of this act.

II. The department of environmental services shall compel the parties responsible for the dumping of hazardous waste at Coakley Landfill to complete an analysis of the water and fish in Berry's Brook in order to determine whether the fish are safe for public consumption. Such analysis shall be completed prior to the next department of fish and game stocking following the effective date of this act.

3 Effective Date. This act shall take effect 60 days after its passage.

LBAO
18-2503
11/21/17

HB 1766-FN- FISCAL NOTE
AS INTRODUCED

AN ACT relative to remediating the Coakley Landfill in Greenland.

FISCAL IMPACT: **[X] State** **[ ] County** **[X] Local** **[ ] None**

	Estimated Increase / (Decrease)			
STATE:	**FY 2019**	**FY 2020**	**FY 2021**	**FY 2022**
Appropriation	$0	$0	$0	$0
Revenue	Indeterminable Increase	Indeterminable Increase	Indeterminable Increase	Indeterminable Increase
Expenditures	Indeterminable Increase	Indeterminable Increase	Indeterminable Increase	Indeterminable Increase
Funding Source:	[ ] General	[ ] Education	[ ] Highway	[X] Other

LOCAL:

Revenue	$0	$0	$0	$0
Expenditures	Indeterminable Increase	Indeterminable Increase	Indeterminable Increase	Indeterminable Increase

METHODOLOGY:

This bill would require the Department of Environmental Services to compel the parties responsible for the dumping of hazardous waste at the Coakley Landfill Superfund Site to implement a ground water extraction and treatment remedy, identified as Remedy MM-4 in the May 24, 1994 Remedial Investigation/Feasibility Study for the Coakley Site, within one year of the effective date of this bill.

The Department of Environmental Services indicates under the Comprehensive Environmental Response, Compensation, and Liability Act, (CERCLA) once a federally approved Remedial Investigation/Feasibility Study (RI/FS) has been initiated at a site, no potentially responsible party may undertake remedial action at the site unless authorized by the EPA. The primary contaminants of concern that are known to be present above the applicable federal and state standards at the site include arsenic, manganese, 1,4-dioxane and polyfluoroalkyl substances (PFCs). The remedial option MM-4 from 1994 did not consider the presence of 1,4-dioxane and PFCs. The seacoast communities of Portsmouth, Newington, and North Hampton contributed municipal waste to the Coakley Site and each community is party to a consent decree established for cleanup of the Site. The current share each municipality pays for response costs associated with the Site are: Portsmouth 53.6%, Newington 5.5%, and North Hampton 4.0%. Therefore, 63.1% of the response costs to implement Remedy MM-4 would be covered by local

municipalities. In order to estimate the current implementation cost of Remedy MM-4, the Department used the 1993 cost estimate and applied an inflation rate of 3% per year as follows:

- The 1993 capital cost of $1,438,000 was brought to 2017 dollars by assuming a 3% annual inflation rate over 24 years resulting in a capital cost of $2,923,000 rounded to $3,000,000. $3,000,000 spread over 30 years at an annual rate of 3% would result in payments of $153,060 per year, 63.1% of which would be the local municipalities' share of capital costs or $96,580.
- Annual operations and maintenance costs are assumed to be $200,000/year, based on the Department's experience with similar treatment system costs at Superfund Sites. 63.1% of $200,000 or $126,200 would be the estimated local municipalities' share of annual operations and maintenance costs.
- The Department estimates the recoverable annual State oversight costs would be $100,000 per year based on NHDES experience with similar Superfund Sites. The municipal share of oversight cost at 63.1% would equal $63,100. These costs would be recovered from the local governments through the existing cooperative agreement with EPA or the consent decree with the potentially responsible parties.
- The total annual cost to local governments associated with the proposed legislation is estimated at up to $285,880 ($96,580+$126,200+$63,100) per year. The remaining 36.9% of the remedial option MM4 Remedy implementation and oversight costs, ($167,180) would be assumed by the non-local government members of the Coakley Landfill Group (CLG).

The Department assumes the additional annual state oversight costs would either be covered by EPA grants or recovered from the CLG or a combination of EPA funding and cost recovery from the CLG.

Additional costs to local government associated with the surface water and fish assessment required by the legislation are indeterminable because the CLG has not been required to prepare a work scope and budget for this assessment work. Further, the EPA and the Department have been participating in discussions with the CLG concerning implementation of a surface water and fish impact assessment and it is unclear whether this bill would result in additional costs since this work is already under consideration.

The Department of Justice indicates, in the event the Department of Environmental Service's orders to the responsible parties were not complied with, the Department of Justice would be required to take enforcement action. The Department of Justice states this could be done with the Department's existing budget.

AGENCIES CONTACTED:

Department of Environmental Services and Department of Justice